

Geology of the Glasshouse Mountains

Study*ladder*



Continental Drift

Millions of years ago, the surface of the Earth looked very different to the way it does today. The Australian continent was part of a larger continent called Gondwana and it was located in a different place to where it is now.

The Earth's crust is made up of very slow moving continental plates that push together or pull apart. Volcanic activity usually occurs near the boundaries of these plates.

Sometimes continental plates move over 'hotspots' where the mantle is closer to the crust. These hotspots can also cause volcanic activity in the surface above.

Pangaea



about 225
million
years ago

Laurasia and Gondwana

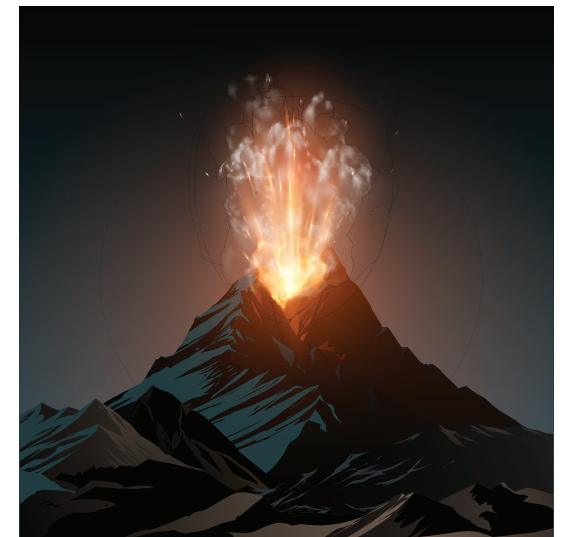


about 150
million
years ago

Modern world



current era

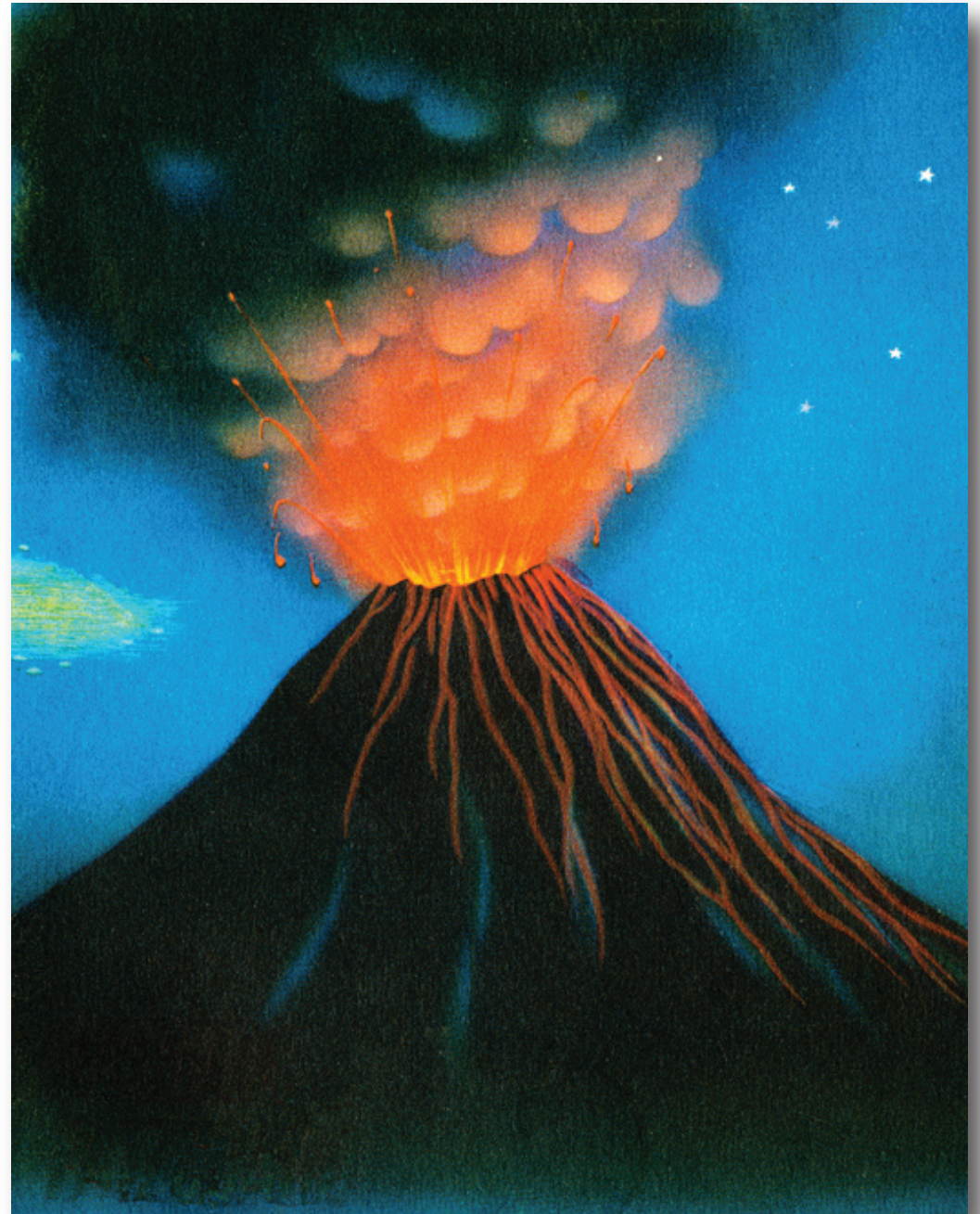


Volcanic Activity In Australia

About 65 million years ago the Australian continental plate included Antarctica and was located much further south than it is today. The Antarctic plate broke away and the Australian plate began moving northwards.

Over time the Australian continental plate moved over a *hot spot*. As a result, a number of volcanoes developed in the middle of the plate. The continental plate continued to drift northwards and new areas of land travelled over the hot spot.

Over time, older volcanoes became extinct and newer volcanoes developed as new land became exposed to the hotspot.



Volcanic Plugs:

The Glasshouse Mountains

The Glasshouse Mountains are the remains of old volcanoes that are now extinct. They are examples of volcanic plugs which are the solidified magma chambers of old volcanoes.

When volcanic material cools it solidifies into hard igneous rocks like basalt. Softer surface sediments are eroded over time. Eventually, whole layers of sedimentary rock are swept away by the action of wind and water. This exposes the harder igneous rocks that are not as easily eroded.

